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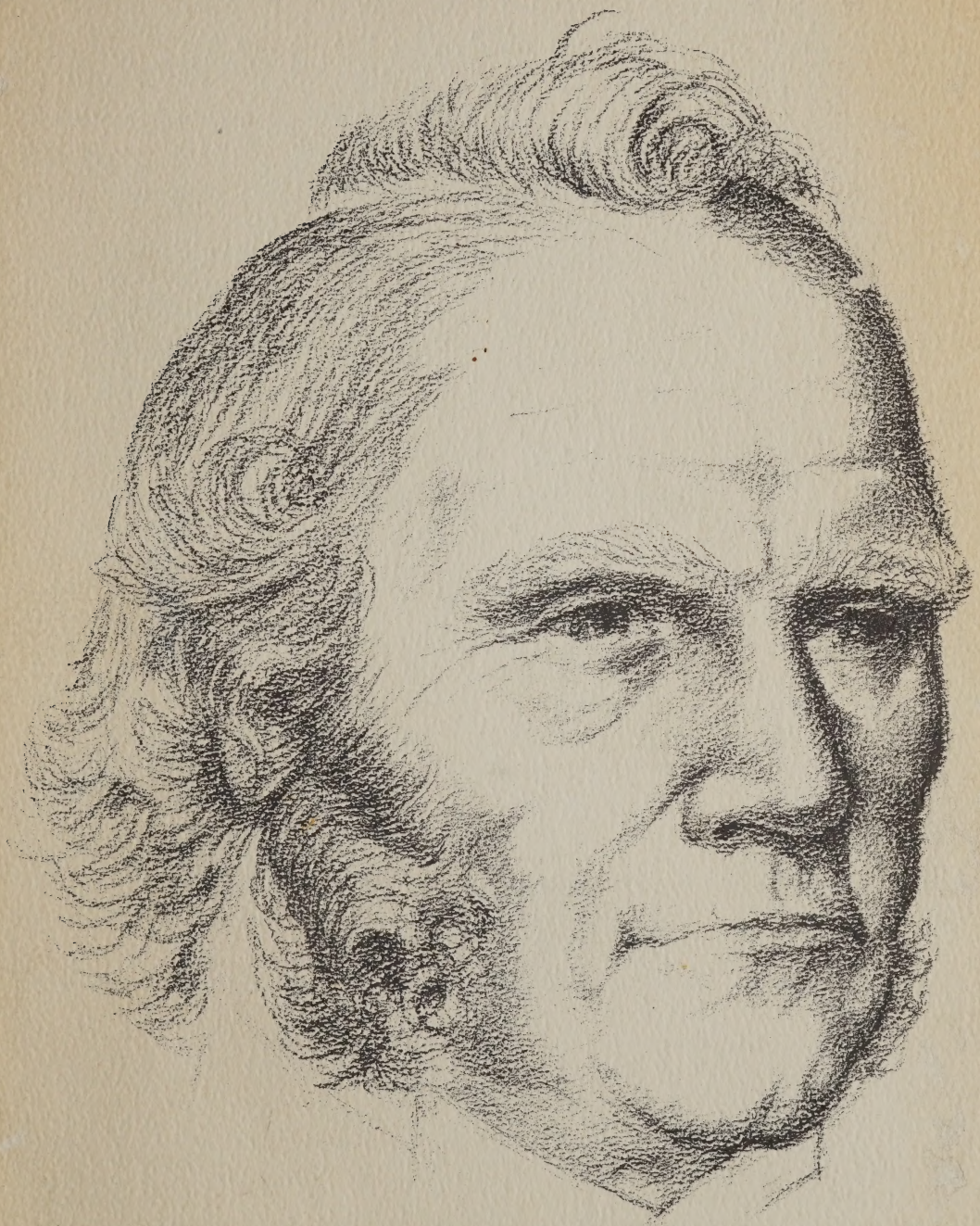
TEXAS Highways

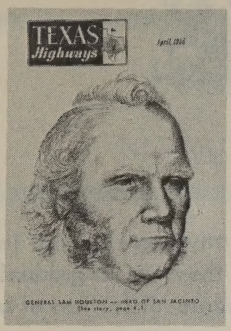
April, 1955



GENERAL SAM HOUSTON -- HERO OF SAN JACINTO

(See story, page 4.)

About the Cover . . .



Born in Rockbridge County, Virginia, member of Congress from Tennessee, tireless friend of the Indians, general of the armies of Texas, president of the Republic of Texas, and governor of the states of Tennessee and Texas, Samuel Houston is perhaps the outstanding figure in the history of our state.

It would take a small volume to tell of his epic wanderings and numerous political offices. He was equally well at home in the wigwams of the Cherokee tribes or the drawing rooms of Washington society; he was a member of the Cherokee nation, and in his lifetime married two white girls and a Cherokee maiden.

On April 21 the citizens of the State of Texas pause to celebrate San Jacinto Day—a day set aside by the Legislature to commemorate the eighteen-minute battle in 1836 that separated the fledgling Republic of Texas from the Mexican State of Coahuila y Texas, and made the name of Sam Houston the most famous one in Texas history.

VOL. II.

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TEXAS Highways

The purpose of this publication, "Texas Highways," is to furnish a medium for presenting practical ideas and information. Employees are invited and urged to submit suggestions and relate experiences which would benefit or be of interest to Highway employees. These conclusions and data are not necessarily endorsed by the Highway Department nor are they to be construed as instructions.

Photographic services are available and other assistance may be obtained, if desired, in preparing material for submission. All material and comments should be directed to the Information and Statistics Division, Austin 14, Texas.

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COMPILED AND EDITED
Information and Statistics Division

DO YOU KNOW TEXAS?

Geologic changes usually take centuries to happen. (That is anywhere except in Texas.) With the exception of earthquakes and volcanic eruptions they are so gradual that they must be charted by scientists in eons of time. This grotesque distortion of a rock creek bed took place in one day.

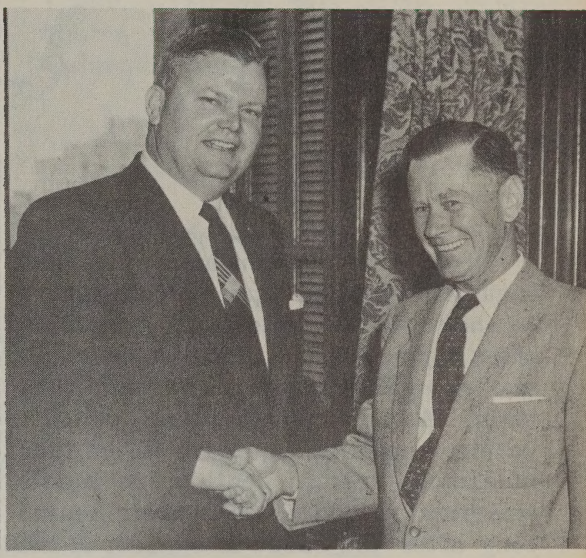
Whether this was caused by geologic action is debatable. Some residents of the area subscribe to the theory that gas from a plugged oil well two miles away seeped under the creek bed and exploded. Whatever the cause, thousands of people have visited the site of this strange occurrence.

Flowing almost entirely in Concho County, Kickapoo Creek empties into the Concho River just west of Paint Rock. When there is any water in it, of course. Sometime around June 1, 1949, this unheaval of the creek bed occurred. In the region of the disturbance the 75-foot wide creek bed was lifted ten feet over a distance of approximately 300 yards, the earth on both sides of the creek has cracked open, and sulphur fumes have killed fish in the pools of water.

State Highway 380 crosses the creek about two miles west of Paint Rock and 28 miles east of San Angelo. The strange subterranean upheaval took place about 500 feet south of the State 380 bridge crossing the Kickapoo. Steps over the fence have been built as a convenience for sightseers.

HERBERT C. PETRY JR.,
NEW HIGHWAY COMMISSIONER

Herbert Petry Jr., second from right, is sworn in as new member of the Highway Commission by Judge K.K. Woodley, as Mrs. Petry and Governor Allan Shivers look on.

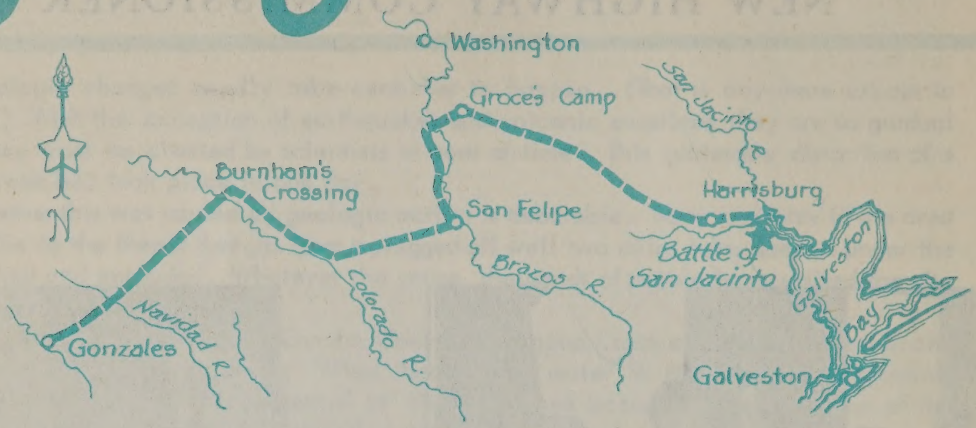


State Highway Engineer D.C. Greer congratulates Petry after he is sworn in for his six-year term as a Highway Commissioner in ceremonies held in Austin on March 16.

Herbert Petry Jr., Carrizo Springs, was sworn in as the new member of the Highway Commission in ceremonies held in the Governor's Reception Room at the capitol on March 16. Judge K.K. Woodley, Court of Criminal Appeals, administered the oath of office to the new commissioner who is replacing Robt. J. Potts.

Petry graduated from high school in Carrizo Springs, attended Trinity University, and received his law degree from the University of Texas Law School. He practices law in Carrizo Springs, is chairman of the board of the Union State Bank, and is president of the Dimmit County Bar Association. In the past he has also served as president of Lions International, president of the South Texas Chamber of Commerce and of the Carrizo Springs Chamber, and president of the Border District Bar Association. He is a director of the Texas Good Roads Association and has served on the Governor's Commission for Traffic Safety and the Texas Economy Commission.

SAN JACINTO



All down through the history of man it has always been a part of his nature to cheer for the underdog; psychologists say we identify ourselves with the one struggling against overwhelming odds. As a part of this self-identification, any gallant gesture in the face of almost certain death stirs men's imagination and lives in their hearts long after the cause and effect of the event itself are forgotten.

Such a touchstone is Texas' Alamo. It has taken its place in history with Robert Bruce and his legendary spider urging him to try just one more time and leading him into the battle of Bannockburn, and Leonidas and his small band of Spartans defending the pass at Thermopylae in an action which they knew was hopeless before it began.

The heroic defense of the Alamo by less than 150 men against several thousand, and the resultant death of the entire garrison, was all that was needed to coalesce the English-speaking settlers in Texas into a fledgling nation determined to win its freedom from Mexico. The deaths of the defenders of the Alamo and the previous massacre of over 400 prisoners at Goliad furnished the battle cry "Remember the Alamo; remember Goliad!" which inspired the Texans in their succeeding clashes with the Mexican forces.

Events leading up to the Battle of San Jacinto were such a conglomeration of resolution and vacilation, determination and hesitancy, that one wonders how the revolution came to be won at all. In the beginning Anglo-Americans living in Texas had no idea of freedom from Mexico, they simply wanted a more liberal constitution than the Mexican. However, when the Mexican despot Santa Anna tried to revoke the liberal constitution of 1824 and to occupy the troublesome province of Texas with military forces under the pretext of protecting settlers from Indians, the Texan purpose was crystallized.

Texas leaders like Stephen Austin and Sam Houston had a hard time convincing the settlers of the danger of the Mexican armies in Texas until the fall of the Alamo on March 6, 1836, and the massacre of Fannin's men at Goliad on March 27. After Travis' final appeal for aid for the garrison at the Alamo reached Washington-on-the-Brazos, Sam Houston immediately left for Gonzales to assume command

of the Texas army.

With the arrival in Gonzales of Mrs. Dickenson, the sole survivor of the Alamo, on March 13 the camp was thrown into a panic by her news of the approaching Mexican armies. Preparations were immediately made to fall back to the Colorado and thus began what has since been called Houston's retreat to victory. Gonzales was burned to the ground by the Texans as they left. The little army of about 400 men struggled to Peach Creek first, then on to the Lavaca River and after resting, moved on eastward to the Navidad. Here Houston appealed for all troops in the area to join him in the United States. As a result of Houston's sudden turnoff onto the La Bahia Road, his army was bypassed by a pursuing column under the Mexican General Sesma, and for the rest of the campaign the Texas army was always north of the Mexican forces, thus protecting their escape route to the United States should flight become necessary.

Going a short way down the Colorado, Houston and his men camped for a week at Beason's Ferry (present Columbia) and the army grew to nearly 1,400. During this time General Sesma and his forces reached the Colorado and camped on the opposite

on the Colorado, and then made one of his unexplained moves that brought his men and even his officers near mutiny. As the straggling army left the Navidad he ordered the column to turn due north onto the little-used old La Bahia Road, thus leaving the main traveled road between San Antonio and San Felipe. Subsequent events proved it to be a shrewd move, but at the time officers and men protested loudly.

At Burnham's Ferry on the Colorado, near the present site of La Grange, the Texans numbers had risen to 600 and they found themselves in the midst of many families fleeing from the advancing Mexicans to safety side of the river. The two armies had faced each other for five days without an engagement when Houston again ordered his men to retreat - this time to the Brazos during the night. How he kept his entire force from mutinying this time is difficult to understand. Refugees had been pouring into the army camp for days and Houston's withdrawal would leave the frontier entirely without protection. Panic ensued and by the time Houston reached the Brazos his army had been reduced more than half by desertions of men who left to assist their families to safety.

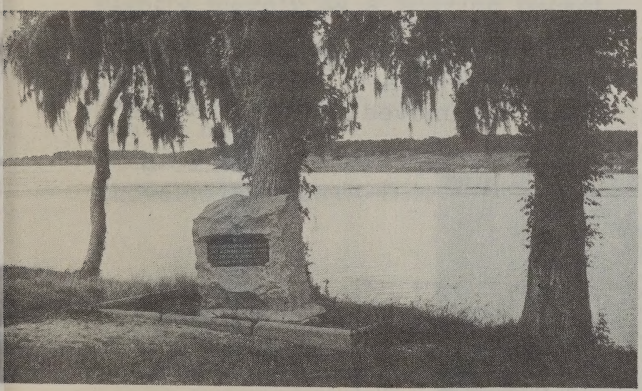
At San Felipe Houston left two

companies that refused to follow him any farther to guard the crossing on the Brazos while he again turned north and went into camp at Groce's place near Hempstead. Heavy spring rains had made quagmires of the roads and flooded creeks and rivers, thus adding to the miseries of the small army. Houston spent nearly two weeks at Groce's reorganizing his undisciplined men and keeping close watch on the movements of the enemy. It was in this work of scouting that men like "Deaf" Smith and Henry Karnes earned lasting fame.

In the meantime, Santa Anna, thinking that the massacres at the Alamo and Goliad had crushed the rebellion, had made no secret of his plans to return to Mexico, and proceeded to break up his forces into several units to garrison Texas towns. While Houston was camped at Groce's the Mexican general, realizing that the Texans still meant business about their resistance, led his main army eastward from San Antonio and ordered his scattered units to join him. Upon reaching San Felipe which the retreating Texans had destroyed, he at first planned to make the short march up the Brazos to Groce's and destroy the Texas army in its camp. However, when he learned that the members of the newly organized Texas government were at Harrisburg he ordered his forces there in the hope of capturing the entire group and crushing the rebellion at its source. When he reached Harrisburg he found it in flames and the government fled to Galveston island. Then, instead of turning back to engage Houston's small army, the Mexican forces marched to Galveston Bay where they heard that Houston's army was retreating again, this time toward the Trinity.

Houston meantime had broken camp at Groce's on April 14. Many of his men still believed that he would march to Nacogdoches where an American army under General Gaines would afford the Texas forces protection; most of them were prepared to depose Houston and elect a new commander. However, when they reached the place where the roads forked, Houston took the one to Harrisburg and his men knew that at last their long retreat was over. They were finally advancing toward the enemy instead of fleeing from him. Leaving his baggage and his sick at

Santa Anna's campsite.



Houston's campsite.

ruined Harrisburg, Houston ordered his soldiers down Buffalo Bayou toward the San Jacinto River. On April 20 they finally sighted the Mexican forces and went into camp in a live oak grove on the banks of the bayou. That afternoon Colonel Sherman and a small cavalry force attempted to capture the Mexican artillery and nearly precipitated a general battle, but were repulsed.

On the morning of April 21, General Cos arrived on the field with his command, thus raising the number of Mexicans to 1,300 officers and men. Houston had between 920 and 1,000 poorly trained, ill-equipped settlers facing them. Santa Anna, supremely confident of his superior strength, decided to attack the Texan camp on the morning of April 22, and then lay down under the trees for his customary afternoon siesta. Screened by rising ground, the Texan camp was a beehive of activity; Houston had given the order for the battle to begin at four o'clock.

What followed was a complete anticlimax to the long, weary months of haggling, retreat, privation, and fear. In the true sense of the word it could not even be called a battle. It was a rout. With wild cries of "Remember the Alamo! Remember Goliad!" the Texans charged through the sleeping Mexican camp, and in the incredible space of eighteen minutes had swept the field. The killing was stopped only at nightfall and when a count was made there were 630 dead Mexican officers and men. Only two of the small Texan army were killed, while seven died later of their wounds.

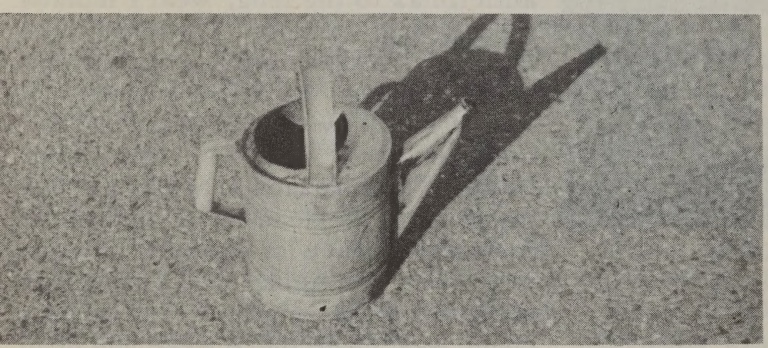
When the battle was lost, Santa Anna fled in the disguise of a common soldier but was captured the following day. His capture was a great stroke of luck for the Texas cause for if he had escaped to return to Mexico and reorganize his scattered armies the war would in all probability have dragged on much longer. After he and Houston had agreed on an armistice, Santa Anna sent orders to his troop commanders directing them to take their men and leave Texas. At last Texas was free.

SEALING SURFACE CRACKS

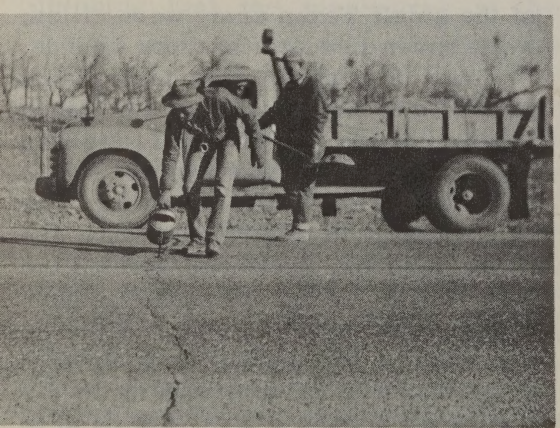
J.M. Rexroat, Senior Maintenance Foreman
District 2

Sealing surface cracks with the hand-spray method has caused considerable concern for a long time due in the main to lack of control of the application of the asphalt. This excessive asphalt generally encountered consequently causes a build-up of the cover material, thus creating an unsightly as well as a rough riding surface.

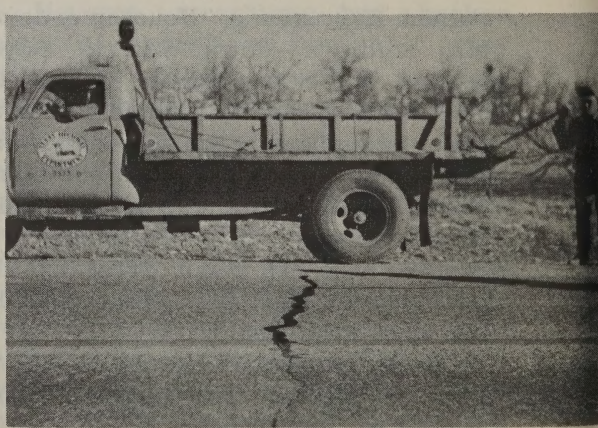
Numerous ideas and theories have been advanced, but we believe an inexpensive two-gallon water sprinkler (modified) is our best solution to this problem at present. The spray nozzle head is removed and the container is



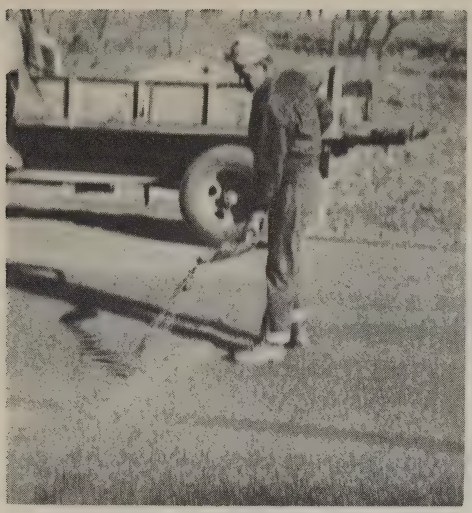
Asphalt distributor. (modified)



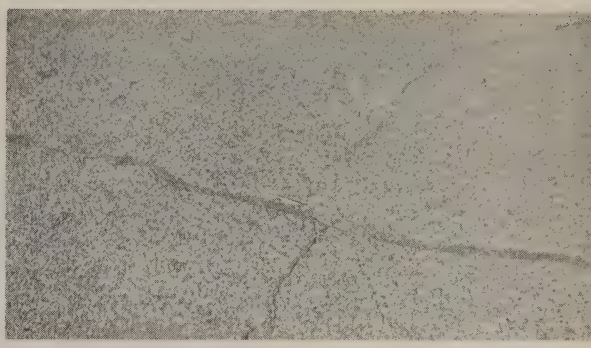
Pouring asphalt.



After pouring.



Applying blow sand.



Before and after.

then used most effectively and efficiently merely as a pouring bucket. The small outlet on this container controls the flow of asphalt and also enables us to follow the course of the cracks better.

Blow sand is then applied by hand shovel to the asphalt-filled crack, thus providing sealed surface cracks with a smoother riding surface than experienced from the hand-spray method.

Pictures show this method of sealing cracks, which incidentally enables us to accomplish about twice as much work as the hand-spray method mentioned in this article.

● ● ●

THIS SUPERB SURREY

ONLY

$89*

*Horses Not Included. Rubber Tires, Whip Socket and Brass-Capped Whiffle Trees Optional at Extra Cost.

Superior in all respects to rigs selling for $125 or more.

☞ N. B. Do not hesitate to invest in a fine Family Rig at this time. The so-called "Auto-Mobile" or Horse-less Carriage is the Dare-Devil's Plaything and has NO FUTURE as a Practical Mode of Transportation. NO Serious-Minded Person will risk life or limb in this Terror of the Road.

MONARCH CARRIAGE COMPANY

We can't vouch for the authenticity of this advertisement of surreys, but it was carried in the 50th Anniversary Edition of The Washington Motorist, official publication of the Automobile Club of Washington.

STATUS OF SPEED ZONING ACTIVITIES

M.V. Greer, Supervising Traffic Engineer
and
Ed Smith, Traffic Designer
Maintenance Operations Division

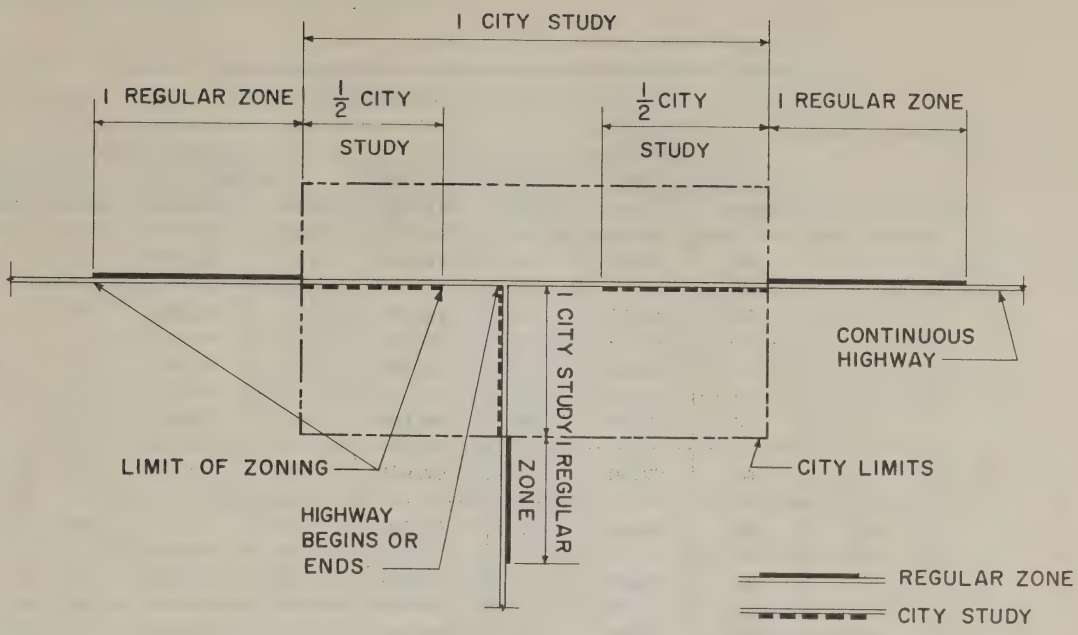
In the July 1953 issue of the Construction and Maintenance Bulletin a tabulation showing the speed-zoning activities of the Highway Department was published. Since that date there has been a steady increase in the use of speed zoning.

The tabulation which appears on the following page is an expanded version of last year's tabulation and shows a complete summary of all speed zoning done by the Department of which D-18 has a record. It is entirely possible that some districts have made speed zone studies for cities which have not been reported to D-18 and for which D-18 does not have a copy of the city ordinance establishing the zones. The earliest zone included in the tabulation, which was set by Commission Minute, is dated 1942.

The mileage of regular speed zones set by Commission Minute increased from 259.35 to 489.37, or 88.69 per cent, during the period from April 22, 1953, through December 31, 1954. As might be expected, the greater percentage of this zoned mileage is on highway approaches to incorporated towns or cities and through incorporated towns, although some mileage of strictly rural highways is included.

Some districts have been very successful in securing the cooperation of incorporated towns in zoning highway routes through their corporate limits. In nearly all cases, such zones have resulted in raising the city speed limits to more reasonable and realistic values. There is still much to be accomplished, however, in selling cities on the value of reasonable and prudent speed limits. There are also many unincorporated towns which still have 30 mph posted speed limits that should be zoned upward on the basis of a traffic and engineering study.

The use of construction speed zones has shown a tremendous increase in the past year. As of December 31, 1954, there were 1,021.29 miles of such zones still in effect. Apparently the lowered speed limits are helping to control traffic carried through construction projects, and since construction speed zones do not require the detailed studies of regular speed zones and are self-canceling upon completion of the project, there is reason to believe that even greater use will be made of them in the future.



STUDY - A study consists of a series of speed checks made on a section of highway and plotted on a strip map to determine whether or not speed zoning is justified.

REGULAR ZONE - A regular zone is a speed zone, outside the corporate limits of a city or town, established by Commission Minute. Each zoned highway approach to an incorporated city or town is counted as one zone.

REPLACED REGULAR SPEED ZONES - Replaced regular speed zones consist of the number and mileage of zones replaced by subsequent zones. The plus sign denotes mileage added by the replacing zone, and the minus sign denotes mileage deleted by the replacing zone.

STUDIES NO ACTION TAKEN - "Studies no action taken" consists of studies made where the results showed that speed zones would be of no value.

CITY STUDY - A city study is a speed zone study that extends through a city on a continuous highway. A study that extends into a city for a short distance only is counted as one-half of a city study. A study that extends into a city and terminates where the highway terminates or begins is considered as one city study.

ZONES SET BY CITY ORDINANCE - In some cases the city officials did not pass an ordinance establishing speed zones after the study was made. The figures shown here consist only of those studies that were reported to the Austin office. It is very likely that other studies were made by the district offices which were not reported to the Austin office. It is also possible that some zones were set by city ordinance, and the Austin office did not receive a copy of the city ordinance.

SPEED ZONNING AS

	SPEED ZONES SET BY HIGHWAY COMMISSION MINUT							
	Speed Zones in Force				Cancelled Speed Zones			
	Regular Zones		Construction Zones		Regular		Construction	
District	Number	Mileage	Number	Mileage	Number	Mileage	Number	Mileage
1	40	21.61	6	29.203	2	15.700	3	28.695
2	64	40.01	6	26.759	5	31.192	0	0
3	6	11.82	7	73.925	2	4.911	3	45.004
4	2	3.18	5	40.294	4	3.476	2	28.485
5	48	27.50	9	87.023	0	0	1	10.362
6	27	18.64	12	91.680	0	0	19	194.921
7	20	13.23	2	16.821	2	3.350	0	0
8	17	8.86	19	150.487	2	13.230	3	35.032
9	13	11.80	9	44.196	5	0.570	0	0
10	99	65.46	8	20.966	3	10.961	4	24.214
11	16	7.34	2	14.620	0	0	1	1.700
12	44	125.92	10	44.215	2	2.030	5	30.928
13	18	17.61	2	21.997	0	0	5	41.866
14	62	25.59	3	21.385	12	44.470	5	15.482
15	117	119.47	14	76.229	6	9.490	19	218.033
16	13	14.44	4	21.628	1	1.660	4	47.852
17	0	0	5	2.694	1	2.140	2	7.738
18	11	14.52	6	16.273	4	16.040	18	118.967
19	17	9.30	6	34.150	1	22.000	1	14.087
20	16	13.93	6	22.092	1	1.040	8	64.902
21	42	50.78	10	81.980	0	0	1	2.980
22	7	3.09	0	0	0	0	2	27.924
23	10	7.02	1	3.130	2	2.500	3	12.596
24	24	39.66	7	68.567	4	2.170	2	13.392
25	10	5.52	3	10.980	0	0	1	12.600
TOTAL	743	676.30	162	1,021.294	59	186.930	112	997.760

OF DECEMBER 31, 1954

			SPEED ZONE STUDIES IN INCORPORATED CITIES				
placed Regular Speed Zones		Studies No Action Taken	City Studies Made		Zones Set by City Ordinance		District
mber	Mileage		Number	Mileage	Number	Mileage	
0	0	0	24	25.55	0	0	1
1	≠ 1.82	0	59	86.38	45	67.76	2
1	0	0	2	2.19	0	0	3
2	- 0.19	1	0	0	0	0	4
1	- 0.20	1	19	18.17	9	8.36	5
0	0	1	0	0	0	0	6
2	≠ 0.12	24	12	25.77	0	0	7
2	≠ 0.70 - 1.27	2	22	34.53	8	14.22	8
0	0	0	15.5	32.09	12.5	25.49	9
3	≠ 0.85	0	54	115.98	1	3.85	10
1	≠ 0.71	5	37.5	56.70	33	51.54	11
13	≠ 15.26 - 8.70	15	4	10.22	3.5	4.78	12
0	0	0	10.5	13.77	8	9.19	13
0	0	0	49	73.31	44.5	67.13	14
10	≠ 0.98	2	31.5	44.95	22	30.58	15
0	0	0	7.5	18.71	0	0	16
0	0	0	0	0	0	0	17
0	0	0	2	4.86	0	0	18
0	0	0	13	29.98	13	29.98	19
0	0	0	11.5	20.02	3.5	5.74	20
1	≠ 0.34	1	30.5	52.11	9.5	20.57	21
0	0	2	2	1.77	0	0	22
1	≠ 0.30	3	12	21.89	5.5	14.05	23
3	- 5.00	0	5.5	7.62	5.5	7.62	24
0	0	2	0	0	0	0	25
41	≠ 21.08 - 15.36	59	424.0	696.57	223.5	360.86	TOTAL

The slogan, "A million more in '54," certainly became a reality in respect to the number of tourists who vacationed in Texas last year. Over a million more tourists visited here last year and they swelled the cash crop from tourists by 15 per cent more than the 1953 visitors. A study just released by the Information and Statistics Division discloses that $409 million was spent in 1954 compared to the $356 million left in Texas by 1953 out-of-state visitors.

Last year 3.3 million cars entered the state, each carrying an average of 2.6 persons. These visitors stayed an average of 5.5 days and spent an average amount of $7.80 per person per day. As in 1953, California topped all other states by sending 537,112 vehicles and 1,396,491 visitors. Approximately 208,000 of our visitors came from Canada, Mexico, and other countries.

When asked to itemize their likes and dislikes, the tourists indicated that 27 per cent liked our highways, 14 per cent approved of our travel information bureaus, and 9 per cent liked our roadside parks more than anything else they saw in the state. To balance the other side of the scale, 6 per cent disliked the highways, 1 per cent the bureaus, and 7 per cent the roadside parks. Thinking that as Texans we should be able to fix anything, 30 per cent registered complaints against the weather, and one Yankee went so far as to suggest that we air condition the whole state. (Bet we could do it, too.)

March through October were the most popular months for tourist travel, and the survey figures also indicate that we enjoy a large repeat business, with 37 per cent of the travelers stating that they have been here before.

Figures used to compile this annual survey are obtained from survey cards distributed to tourists at the seven Highway Travel Information Bureaus located on major highways entering the state, and are supplemented with data from other sources. Over 121,000 inquiries from prospective tourists were received and answered through the mail by the Information and Statistics office. Also, nearly 400,000 visitors stopped at the travel bureaus for curb-service information and to obtain descriptive material on points of interest.

Copies of the 1954 Tourist Industry Report may be obtained from File D-16, Information and Statistics Division, Austin, Texas.

Insect Control for Roadside Parks

R.N. Jennings, District Maintenance Engineer
District 7

During the summer season insects such as flies and wasps swarm around our roadside parks. An otherwise attractive layout loses its appeal when this condition is found to exist by motorists.

This past summer the practice of spraying the underside of tables, incinerators, fireboxes, and floor slabs with DDT solution was adopted. A substantial reduction in the number of insects around the roadside unit was noted. This spraying was performed each time a park was cleaned.

A 25 per cent solution of DDT was mixed with water to give a solution of 5 per cent of the chemical. Small sprays manually operated were used to perform the spraying. Approximately five gallons of DDT, costing about $7.50, were used by each foreman in the district. This is considered to be an extremely low expenditure when the increased convenience and comfort gained by users of our parks was considered.

Typical West Texas roadside park.

INTERESTING HIGHWAYS

Roy S. Rodman, Supervising Landscape Architect
Maintenance Operations Division

Roadside improvement has been called roadside development, roadside beautification, highway landscaping, and numerous other names. However, all of these terms have referred to one type of highway work. It is very difficult to separate this work from the other types or phases of highway construction and maintenance.

A highway that blends into the landscape, conserves natural beauty devoid of man's misuse, and supplements natural beauty with necessary transplanted material are the factors embodied in roadside improvement. When adequate consideration has been given to these factors, we have a very interesting highway and one that provides for the safety, comfort, and convenience of the traveling public.

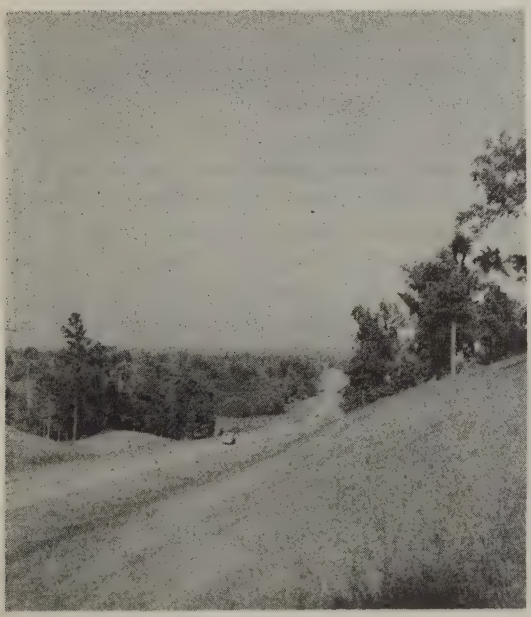
In traveling our highways, the motorist views not only the right of way, but the adjoining property as far as the eye can see. Authorities claim that the angle of vision of the eye is reduced to approximately one-eighth at 60 miles per hour as compared to 30 miles per hour. This fact and the high speed of travel determine the amount of work necessary to provide a series of views for the motorist.

Since the appearance of the highway does not depend upon the right of way alone, the assistance of garden clubs and other civic organizations is needed in securing cooperation of the adjoining property owners in providing attractive views. This extra work is necessary to enhance and protect the improvements the Department makes on the right of way. Since the Department is interested in a neat, attractive appearance of adjoining property, but is in no position to secure such cooperation, it becomes necessary for us to depend upon local civic organizations to obtain it.

The various organizations in a community or city may combine to make a concerted effort in carrying out a really effective program. Such a program could be to educate the public relative to scattering trash or litter, and to clean up and improve grounds around all public buildings, commercial establishments, and homes. These groups, by accepting and encouraging others to abide by the standards for roadside planting that are essential for highway safety, utility, and economy of maintenance, will assist the Department tremendously. In some instances civic groups have participated in planting projects on highway right of way by providing varying amounts of funds, but in all instances the designs, choice of plants, and the section of highway are to meet the standards established by the Department.

The basis of roadside improvement is established during the location, design, and construction of the highway, depending on how well it blends or fits the terrain. A profile and cross-section design that provides adequate safety for the motorist also reduces the cost of maintenance of the highway. Erosion (by wind or water) of these highway slopes is economically controlled by a vegetative cover, the value of which constitutes approximately three-fourths of the total aesthetic appearance. The most

Crape myrtle planted on edge of shoulder on a high fill. It is very colorful and makes drivers feel at ease, as it conceals steep fill slopes.



Well-designed highway with excellent sod to control erosion. Note preservation of native trees providing various views.

desirable vegetative cover is a turf or heavy growth of grasses.

During the process of establishing the grass and maintaining the right of way after construction, it is impossible to prevent the growth of obnoxious weeds as the seeds are brought in by wind, water, animal, or vehicle. Considering the use of the highway, the effectiveness of control, and the cost of controlling these weeds, a judicious program of mowing is more desirable. This program will provide the most desirable appearance of the right of way and will reduce fire hazards to adjoining property.

As the basis for beauty of the highway is incorporated in the actual design and construction, likewise the conservation of existing features such as trees, shrubs, and rock outcrop-

Picnic facilities offer motorists a place to stop in safety and relax from long drives.

pings should be preserved. The native trees provide points of interest and frame views off the right of way. Preserving native trees gives us a finished product as soon as construction is completed, whereas transplanted ones require fifteen to twenty years to produce the same effect. The native trees require less maintenance, thrive under natural conditions, and help blend the highway with the surroundings. With proper preservation of trees and shrubs during construction, transplanting of additional plants should be limited primarily to those necessary to improve the aesthetic quality of the highways.

The safety of the highway is increased when trees emphasize a change in alignment, warn the motorist of some obstruction or dangerous condition, or relieve the monotony of driving by providing varying scenes. Too many trees can be as monotonous as not having any.

Our roadside parks, being a part of this work program, provide primarily for the needs of the traveling public, but local citizens usually use them about as much. These facilities offer a place for drivers to stop in safety off the busy travelway and relax, thereby making them more alert and safer drivers. This is very essential whether it is a trucker or motorist making a long drive.

Effectiveness of roadside improvement work depends primarily on the consideration given in the design and construction. The maintenance operations should be conducted to encourage nature to improve or increase this effectiveness. Highways which have followed this plan receive favorable comments from our patrons, the traveling public.

REFERENCING AUXILIARY STRIPE FOR NONPASSING ZONES

Billie E. Davis, Associate Resident Engineer
District 2

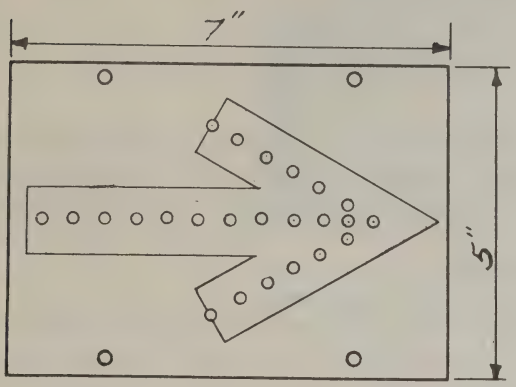


FIG. 1

Sketch showing tin shingle with painted arrow. Holes in edges are to affix to fence. Holes in arrow are to determine direction of zone after paint has weathered off.

In the summer of 1953 this residency started referencing the beginning and end of the auxiliary nonpassing stripe. The referencing is accomplished in the following steps.

Step 1: Locate the beginning and end of the no-passing zone.

Step 2: Paint an arrow on tin shingle (Figure 1).

Step 3: Hang shingle on fence opposite the beginning or end of the zone and on the same side of center line as the zone, with the arrow pointing in direction of zone (Figure 2).

The advantage of this method of referencing is that once the zones have been established, they may be relocated by one person instead of a field party.

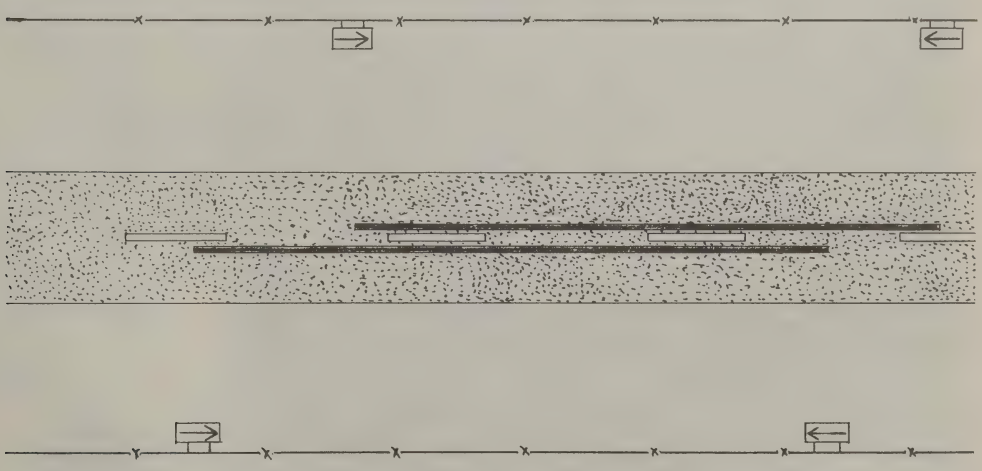


FIG. 2

Sketch showing location of reference shingles.

THE DISTRICTS PASS IN REVIEW

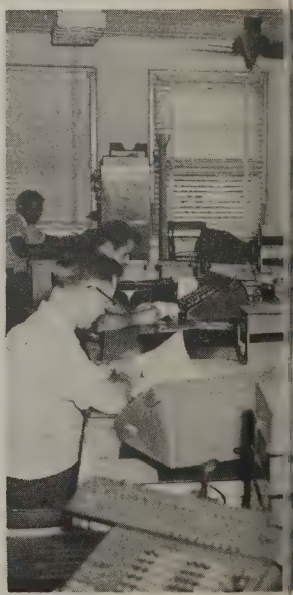
DISTRICT 14

Last month we presented a pictorial review of one of our most congested
This month we progress a little farther west, away from the Gulf Coast
Hill Country. The texture of the land changes from the level deep soils of
variety which includes rocky, cedar-covered hillsides, sand areas, rec
far-famed pink granite outcroppings.

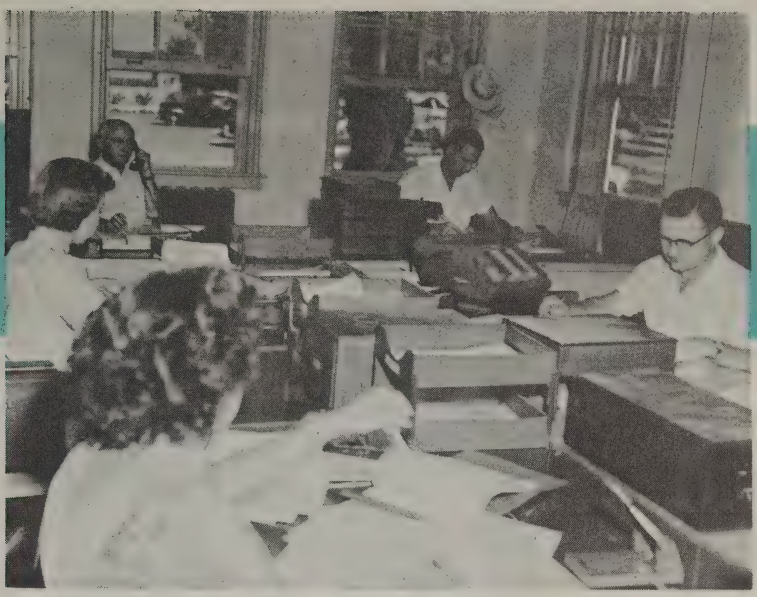
Regardless of the terrain, however, the people who work for the Highv
just about the same jobs wherever they are in the state. A little more of
of that, perhaps, but there are still books to be kept, requisitions to be fi
to be written. District 14 personnel are a little different in one respect h
they do in the "Capital City," they probably have more visitors. In this
to doff our hats to cooperative District 14 for its help in staging pictures
lications.

But all this is beside the point. Come on and meet some of your co-wo

District 14 office building adjoining Camp Hubbard. Travis Long, Expressway Engineer, is just leaving after discussing planned work on Austin's expressway.



Busy in the accounting e
Kriegel, Cy Zaleski, Ji
and Bernice Simmons.



Same office, other end. Down next to the window sit O.C. Thorensen, District Accountant, and Paul Hancock.

trics - Houston.
Plain and into the
plains area to a
ay, and Texas'

Department have
and a little less
out, and letters
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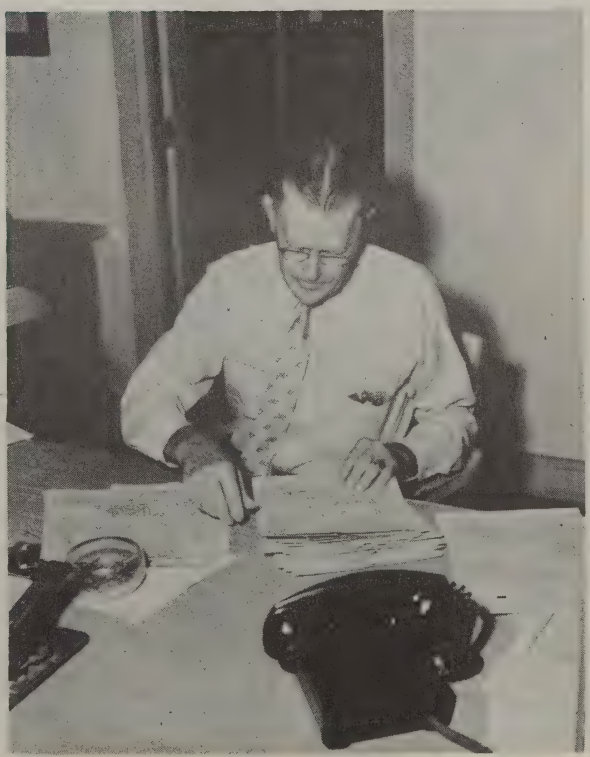
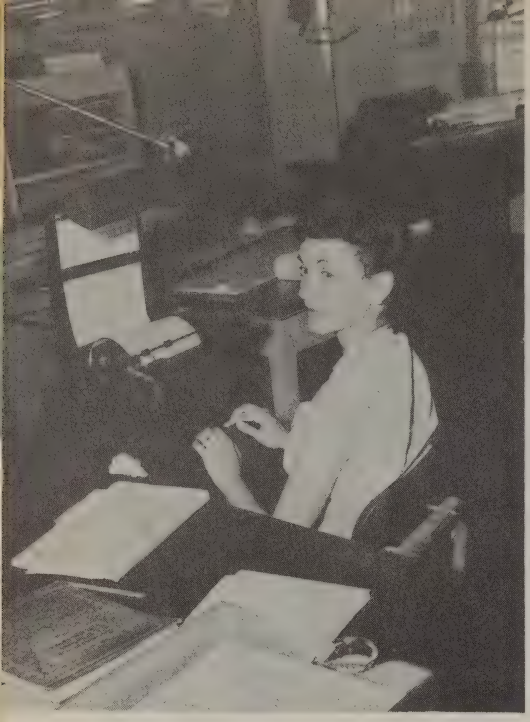
s in District 14.

f District 14 are (left to right) Bill
gsley, Alvin Cloer, Joyce Gumm,



The paperwork never seems to end. R.R. Schroeter, Associate Office Engineer, is busy checking permits.



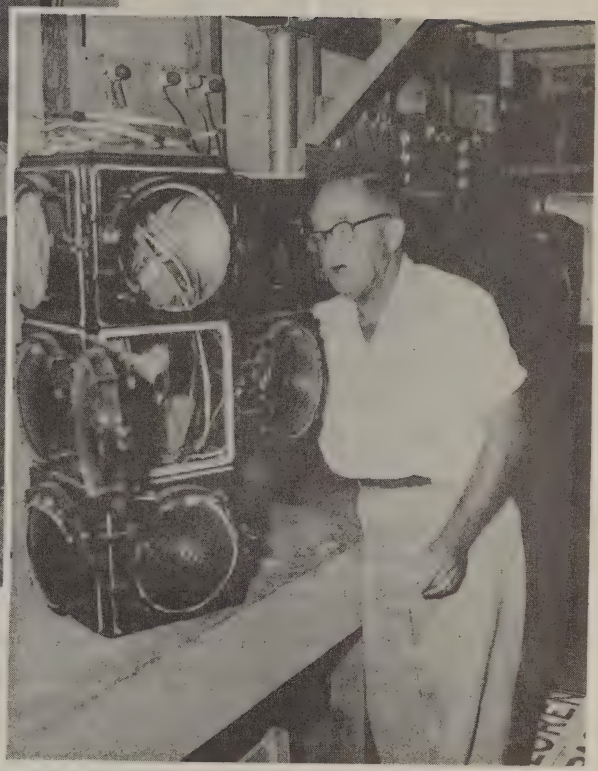
And more paper work. Mrs. Margie Fitzgibbons, Junior Clerk, typing deeds.

The Highway Department has everything - even women draftsmen. Here Mrs. Margaret Dulin is inking plan profile sheets on a new farm-to-market road.

Soils from all over the district are constantly sampled and tested for their various uses of interest to highway engineers. Clarence Michalk, Chief Inspector, is here doing a screen analysis of a soil sample from Williamson County.

"Service while you wait" in the shops. William B. Bates repairs a dragline oil pan while "Strawberry" Harrison, Dragline Operator, stands by.

Another step in testing soils. Dayton Haile, Senior Laboratory Assistant, is quartering samples in the District 14 lab.



Traffic signals are another phase of highway construction and maintenance. Frank B. Pinget, Equipment Supervisor, is putting an overhead signal light in order.

District 14 will soon occupy a new, much more adequate building, which is now under construction on this site on the Austin Expressway.

H.L. Arno, Director of Personnel

District 4

District Headquarters, Amarillo: Donald H. Rose changed from Office Engineer to Senior Designing Engineer March 1, 1955.

District 7

County Residency, Ballinger, to District 7, District Headquarters, San Angelo: Felix Itz changed from Senior Resident Engineer to Advisory Engineer on modified service March 5, 1955.

County Residency, Junction: W.N. Hardeman, Senior Resident Engineer, accepted retirement December 31, 1954.

District 9

District Headquarters, Waco: R. E. Burns Jr., changed from Resident Engineer to Senior Resident Engineer March 1, 1955.

District 12

District Headquarters, Houston, to Houston Urban Project, Houston: A.C. Kyser, Assistant District Engineer, transferred as Engineer-Manager March 15, 1955.

District Headquarters Laboratory, Houston: Frank S. Mitchell Jr., changed from Laboratory Engineer to Senior Laboratory Engineer March 1, 1955.

District 14

Expressway, Austin, to Bridge Division, Austin: H. W. Kessler, Senior Designing Engineer, transferred February 16, 1955.

District 16

County Residency, Corpus Christi, to Expressway, Corpus Christi: F. B. Mason, Senior Resident Engineer, transferred as Expressway Engineer March 1, 1955.

District 20

Expressway, Beaumont: H. E. Furry changed from Senior Resident Engineer to Assistant Expressway Engineer March 1, 1955.

Houston Urban Project

W. J. Van London, Engineer-Manager, resigned March 15, 1955, to accept retirement.

Maintenance Operations Division, Austin

Travis W. Brown changed from Engineer, Buildings and Real Estate, to Senior Engineer, Buildings and Real Estate, March 1, 1955.

William J. Alsup changed from Traffic Designing Engineer to Senior Traffic Engineer March 1, 1955.

Sam E. Roper changed from Traffic Designing Engineer to Senior Traffic Engineer March 1, 1955.

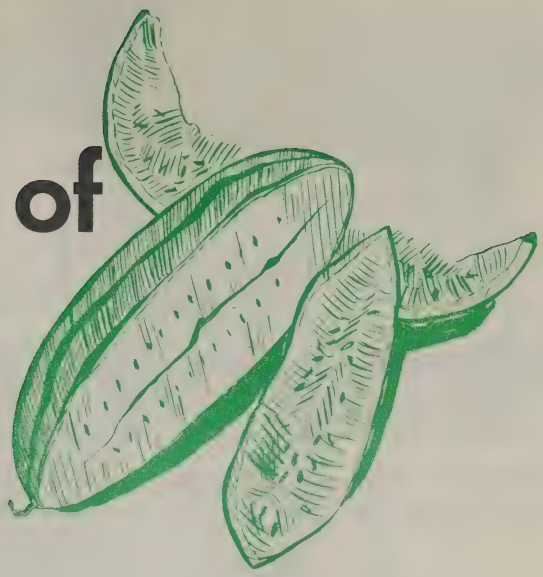
Archie J. Sherrod changed from Supervising Field Engineer to Supervising Maintenance Engineer March 1, 1955.

William R. Welty changed from Traffic Designing Engineer to Senior Traffic Engineer March 1, 1955.

Road Design Division, Austin

E.J. Willson reappointed as Senior Designing Engineer February 16, 1955.

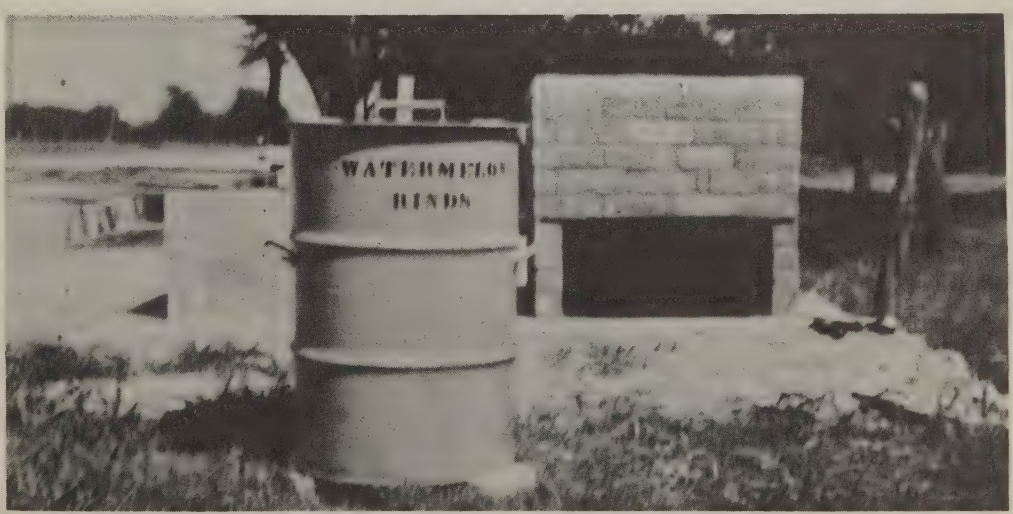
Disposing of



Alton Vordenbaum, Maintenance Superintendent
District 15

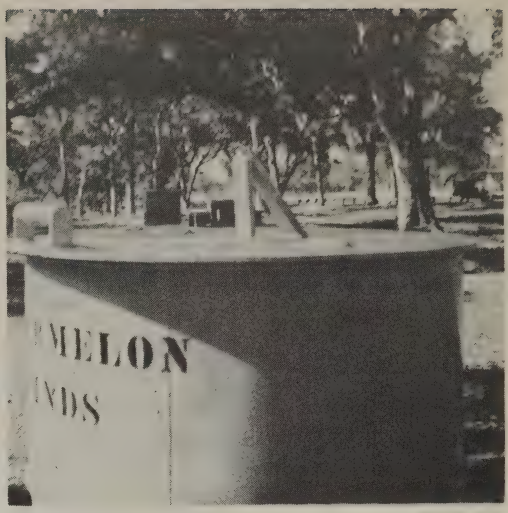
When trash disposal units, trash wells, and incinerators were installed in roadside parks in District 15, it was generally assumed that they would accommodate all kinds of trash without encountering difficulties. However, during the watermelon season, it developed that these disposal units, filled with trash and watermelon rinds, were difficult to burn out since the rinds caused burnable trash to be saturated with moisture.

Watermelon rinds also caused ill odor and their removal from wells



Barrels for watermelon rinds are painted with a soft green color. Letters are black.

Barrels are equipped with strong handles one on each side.



The heavy lid has a handle and lid stay.

became a difficult operation.

Frank Van Houten, Senior Maintenance Foreman at New Braunfels, solved this problem by providing barrels, equipped with heavy lid, for each table in addition to existing trash disposal units. The words "Watermelon Rinds" were stenciled on the barrels.

During the past watermelon season this method has been most helpful since rinds are easier to dispose from barrels than any other trash disposal unit.

● ● ●

'54 Traffic Toll

Following are preliminary figures from the National Safety Council on the traffic toll for 1954:

	1954	% Change from 1953
Deaths	36,300	−5%
Injuries	1,250,000	−7%
Cost	$4,350,000,000	+1%
Mileage	560,000,000,000	+4%
Death rate	6.5	−8%

Retiring Commissioner Honored

Honored by the Texas Good Roads Association after six years of service on the Highway Commission, Robt. Potts and his wife pause to chat with friends at the reception preceding the dinner.

Robt. J. Potts, Highway Commission member from Harlingen who retired March 16 after six years of service on the Commission, was honored February 24 at a reception and dinner given by the Texas Good Roads Association.

E. H. Thornton Jr., Chairman of the Commission, presented Potts with a buckskin-bound album on behalf of all the State Highway Department employees. The album was specially prepared by the Highway Department and illustrated Potts' six years of service with photographs and cartoons.

Potts has been active in efforts to build good roads in Texas for over 40 years. In 1913 while professor of highway engineering at A&M College, he helped write a bill designed to organize a state highway department. This bill was vetoed by the governor, but after continued campaigning the bill creating a highway department was passed in 1917. In recognition of his outstanding leadership and ability, he was appointed a member of the State Highway Commission in 1949.

E.H. Thornton Jr., Chairman of the Highway Commission, presents Potts with an album on behalf of the employees of the Highway Department. Prepared by the Department, the album outlines Potts years with the Commission.

General Ike Ashburn of the Good Roads Association presents Potts with a certificate honoring his service.

For auld lang syne - D.C. Greer, Highway Engineer, Potts, and Thornton shake hands during festivities.

Curtis Hancock, first Chairman of the Highway Commission, who served from 1917 to 1919, swaps tall tales with retiring Commissioner Potts.

As of March 1, 1955

Mileage of State and County Roads 199,129

STATE HIGHWAYS

FA----	15,938.79
FAS---	9,677.10
NonFA-	667.50
Total-	26,283.39

- (Of this 859 Mi. are new hwys. since Sept., 1945)

Designated but not yet under maintenance 367.66

Marked & Maintained 25,915.73

*Urban-City Maint. Paved: 133.37
*Urban-State Maint. Paved: 2,210.97
Rural-State Maint. 23,571.39

Earth 97.96
**Metal Surface 17.88
Paved 23,455.55

FARM TO MARKET ROADS

FAS---	15,315.75
NonFA-	11,424.47
Total-	26,740.22

Designated but not yet under maintenance 4,881.63

Marked & Maintained 21,858.59

*Urban-City Maint. Paved: 21.34
*Urban-State Maint. Paved: 528.69
Rural-State Maint. 21,308.56

Earth 36.16
**Metal Surface 77.18
Paved 21,195.22

TOTAL HIGHWAY SYSTEM

FA----	15,938.79
FAS---	24,992.85
NonFA-	12,091.97
Total-	53,023.61

Designated but not yet under maintenance 5,249.29

Marked & Maintained 47,774.32

*Urban-City Maint. Paved: 154.71
*Urban-State Maint. Paved: 2,739.66
Rural-State Maint. 44,879.95

Earth 134.12
**Metal Surface 95.06
Paved 44,650.77

Dustless road mileage in State:

County System ...	9,358
State System ...	47,545
Total	56,903

Total street mileage in all Texas incorporated cities . . . 28,307

* Urban refers to mileage within incorporated cities.
** Metal includes gravel, caliche, shell, etc.

Road Life and Costs

Life insurance companies, by the study of population, have arrived at life curves for human beings. These curves reflect the average age and the remaining life expectancy at any given age. In the last two decades it has become easier to correlate studies concerning the birth and death rates of population to similar studies as they apply to industry. This has been brought about, on the human side, by the decline in the infant mortality rate and to the fact that epidemics no longer take great numbers of lives. Looking at the industrial side one might say that the "mortality" rate between humans and industrial properties has become more alike as a result of better business in the postwar years. During these years industry has had to modernize to meet competition. Obsolete equipment, once pressed into service long past its normal life, can now be replaced at a rate that proves to be more economical.

Since 1936 studies of this nature, as they affect Texas highways, have been carried on in the Planning Survey Division. For instance, the completion of a new Texas highway is recorded just as carefully as the birth of a new baby. And too, all the important information about this new highway is jotted down, such as how much it cost, its exact location, and all the necessary materials that were required for its construction. During its life this highway is never forgotten. Each maintenance betterment and construction project that affects the highway is carefully noted and finally, after its useful life and "death" occurs the reason is noted in the obituary and permanently filed in the Planning Survey records.

The results of these studies were recently published in "Texas, Road Life and Costs." Limited copies of this publication have been distributed through the regular channels. Additional copies are available from D-10F upon request.

H.A. Cartier, Administrative Analyst
Highway Planning Survey Division

Vanished King of the Prairies

When the lean and leggy Longhorn disappeared behind the pages of history he left behind the legend of sagacity, toughness, and endurance that has snowballed into an amazing myth in our time. Just as his contemporaries of the wild and wooly west, Wild Bill Hickok, Buffalo Bill, and other heroes have become storybook supermen, the Longhorn has become a fabulous animal, a peerless critter dwarfing in every way our soft and pampered modern cattle.

But endowed, as he has been in popular misconception, with all the virtues of a super animal, the sober and unadorned truth about the Longhorn is as amazing as any of the tall tales. He was in fact an empire builder, a pioneer, and an animal of exceptional parts; he was the foundation of the original cowlands of America, a wild scalawag that dominated his range and became its economic salvation.

Personally, the Longhorn was self made. He sprang full blown from the canebrakes and mesquite; he was his own geneticist, exercising his own selection and fitting himself for the hectic battle for survival on a rugged frontier. He achieved stature and character without benefit of human attention, but no more perfect animal for his life and times could have been bred by science.

In many ways he was a throwback. On one side of his family were the Spanish cattle, "the little black cattle with needle-sharp horns," which in turn sprang from ancient Egyptian and Asian stock. Here is probably where he gets his long horns. Part of him came from the bulls and cows which trailed the covered wagons from the East. He had hybrid vigor, and he certainly needed it.

The history of the Longhorn began with the settling of the uncharted Southwest. Andalusian cattle were introduced into North America by the 16th century, but it was not until the 1700's that they built their chain of

missions and forts in Baja California and Texas. They brought along their black Spanish cattle. In those days of fenceless pastures and Indian raids, it was inevitable that some of the little black cattle would stray into the wilderness. The weakest died or were the prey of wild animals; the strong survived and were the origins of the innumerable herds of wild cattle in Florida, New Mexico, Texas, and California. They developed a fierce cunning. The savage, sullen, terrific endurance of the mustangs and cimarrones, as they came to be called, gained for them the name of outlaws.

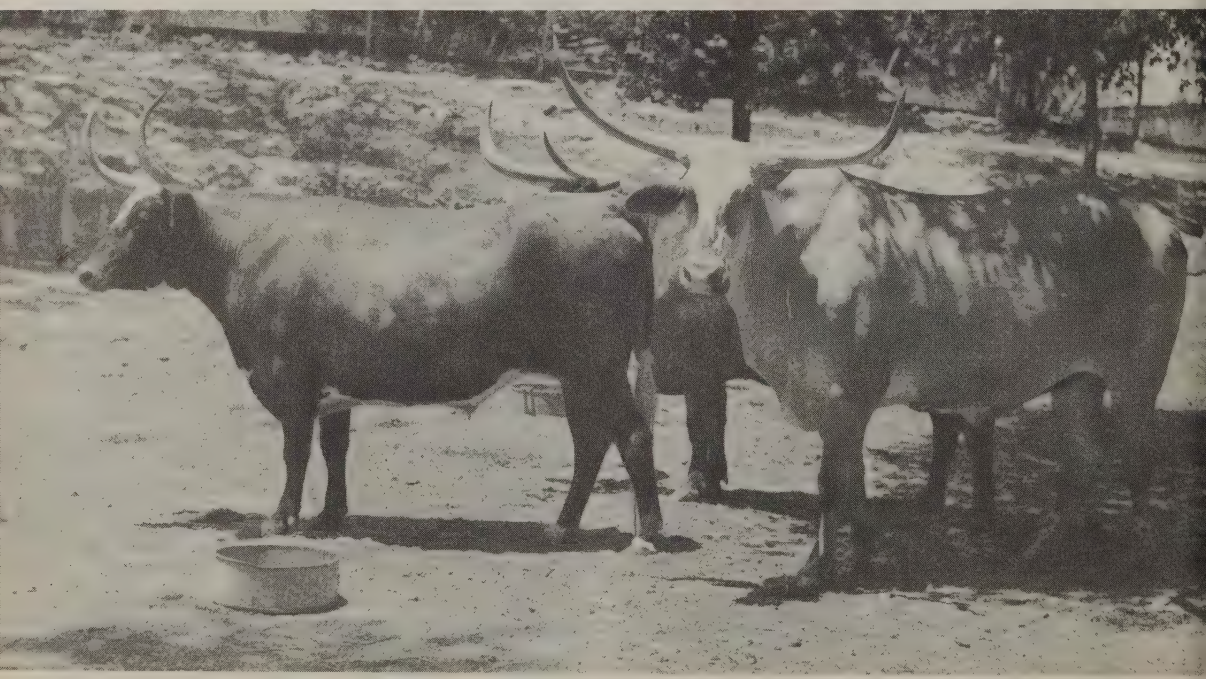
These were not yet the Longhorns, but wild Spanish cattle, sharpened and tempered by their battle for survival. They were fiercer than the most savage buffalo bull; they were "big game." Anyone could eat meat if he could shoot straight enough to hit a cow.

Though the domesticated Spanish cattle from Baja California cut a wide and memorable path through Upper California, and, like the Texas Longhorn, built a cattle empire in the days on the Dons, they changed but little in character and size in the course of the years.

The Longhorn was a Texas product. Here, the wild Spanish cattle were faced with an even more rugged geography and environment, and their predatory enemies were fiercer and more numerous. It was here that they received an injection of domesticated Eastern cattle. Stray bulls and cows, predominately of the Shorthorn breed, joined the wild herds, and bingo – after crossing and recrossing, out came the wild-eyed Longhorn. He developed into a fixed breed; he bred true.

It is not known how long it took the Longhorn to emerge from this union. Between the Mexican and Civil Wars, with one or two brief interludes, cattle were neglected in Texas for other matters. While men were settling the status of the state with bayonet and six-shooter, the Longhorn was in the making in the seclusion of mesquite and chaparral thickets in the lush river bottoms.

Nobody knows why the Longhorn went so much to horns. Their fore-



Sleeker and better fed than their wild ancestors, these Longhorns sport handsome sets of horns.

A sight such as this was enough to chill the heart of a Texas pioneer if he encountered this steer suddenly, for these animals were truly wild beasts.

bears from the West were horned, but modestly so; their remote ancestors from Asia and Egypt owned longer horns, but nothing like the elegant equipment which the Longhorn eventually sported. Perhaps the long horn was a recessive characteristic in several bloodlines, and doubled up in the Longhorn--or perhaps Mother Nature thought them up in one of her lighter moments.

In other ways, too, Longhorns were a distinct departure from anything in their ancestry. Hybrid vigor made them heavier and rangier and they came in a variety of colors. No two were alike; colors ranged from plain to fancy combinations of dun, blue, brindle, red, line black, cream, and spotted. They could run like a deer and fight like a panther. They lost completely the placidity of their domestic relatives, but retained and even improved upon the fierceness of their wild kin.

The long, sullen face had a sinister look, and the eyes were cold and calculating. Their long legs took them great distances for water; like camels, they could go for days without a drink. Often they traveled 25 miles from bedding grounds to water hole. They ate anything; they ate the harness from burned-out wagon trains, the bones of the Mexican dead after battle of San Jacinto, cactus, and some say, rattlesnakes.

By 1835, with more than a century of development back of them, the Longhorns had done well. With only the forces of nature and an occasional animal killed for beef to keep their numbers down, they multiplied prodigiously. There was tenuous ownership of the herds, but unbranded thousands roamed the river bottoms between the Nueces and the Rio Grande and the valley of the Brazos. There were six head of cattle for every person in Texas; there were so many

Longhorns in Texas that a steer could be bought for $4. This was hardly enough to make it worthwhile to round them up and brand them; most of the herds were left practically unmolested to multiply and extend their range.

But here and there and from time to time practical men made the most of this abundance. Rawhide was used for everything; saddles, lariats, whips, clothing, and furniture. Beefsteak was served three times a day, fried in "taller." There was a tremendous hide and tallow trade. The cattle were slaughtered, stripped of their hides and tallow, and the carcasses left for the vultures and coyotes. Hides brought 65 cents each. Indians raided the herds by the light of the moon, and gun-totin' cattle thieves drove their loot silently away up the hidden arroyos. But in spite of all this, the Longhorn prospered and multiplied.

Although there had been cattle drives before the end of the Civil War, they hardly made a dent in the Texas Longhorn.

Previous to the middle 1840's, small herds of cattle had been driven overland to Shreveport, Louisiana, to be shipped in flatboats down the Red River and the Mississippi to New Orleans, then the largest market in the South. In 1846, a herd was driven through Missouri to Ohio.

The Gold Rush in California, beginning in 1849, created a fabulous market for cattle. Money (or what was better, nuggets and gold dust) was plentiful. When the news reached Texas that a steer would bring up to $300, the cowmen invaded the thickets and the brambles of the river bottoms for the meat to supply the hungry gold rush camps.

The first drive to California was made in 1850. Two years later, thousands were headed west. On the long and hazardous drives over deserts and mountains the Texas Longhorn proved his mettle. With incredible stamina he made the long stretches without water, climbed the mountains, swam the streams, and maintained his vitality.

These western drives were interrupted by the Civil War. Texas joined the Confederacy and many a tall Texan left to join the ranks. With the exception of beef for home consumption and the occasional herds driven overland to supply the Southern Army, the Longhorn was again left to himself. One of the most memorable overland drives of Confederate Army beef occurred in 1862, when a herd of 1,000 Longhorns was forced to swim the Mississippi River where it was at least a mile wide.

When the war ended the weary soldiers returned home with nothing but worthless Confederate money in their pockets. All they had was cattle, but they had plenty of those. Northern and Eastern markets were clamoring for beef. Chicago, Kansas City, and St. Louis had the railroads; Texas had the beef.

And to the railroads went the Longhorn; the fabulous trail drives were on. The Chisholm Trail, with its feeder trails, from Texas to the railhead at Abilene, Kansas, became rutted and worn from the hooves of 10,000,000 Longhorns which traversed it from 1865 to 1890. Other lesser trails spider-webbed out of Texas, the Oklahoma Panhandle, and the Southwest, to the railroads.

Those were lusty days in the cattle country. Cowhands, with a full head of steam generated during the three months of the trail, cut loose when they delivered their herds at the yards. They unlimbered their six-shooters, the trademark of the times, and shot one another and the necks off the bottles behind the bars of the all-night saloons.

The nights in the railroad towns echoed with the sound of gunfire, the screams of feminine entertainers, and the curses of men full of raw whiskey. Speculation and gambling were rampant; fortunes were made

and lost by the cattle barons and dukes, lost at the poker tables in Abilene, made on the next drive to be lost again.

A Longhorn steer which cost $8 to $10 in Texas brought $28 to $30 at the railhead. Herds ranged from 300 to 3,000; some counted 5,000. The cost of driving was often as low as a dollar per mile per herd.

The herds made about fifteen miles a day, but could do 30 if pressed. The Longhorn, unlike his more civilized relatives did not bunch up on the trail, but strung out. To keep the strung-out Longhorns from breaking into a trot on the trail, cowboys had to ride on all four sides of the herd. At night a shout, the sound of a thrumming banjo, lightning, ground squirrels, an eagle, or just nothing at all, could set off a stampede. Riders were often trampled to death. There were no bridges and no ferries and after the first herds had passed in the spring the grass was down to the roots. But, somehow, the Longhorn foraged along the way and arrived in surprisingly good condition.

Chuck wagons carried the bedrolls and simple rations of the trail bosses and cowboys. Steak three times a day with beans and sourdough biscuits made up the sumptuous fare. A spade was necessary equipment – cattle rustlers, brawls, and the rigors of the trail made gravedigging one of the accomplishments demanded of the cook.

The Longhorn passed away as the result of no single affliction. There were complications. Certainly his long horns (a six-foot spread was very inconvenient in a box car), the settling of the West and demand for better beef in Eastern markets all had a hand in doing him in. However, if these things supplied the coup de grace which ended his reign, barbed wire wound his shroud. By 1888 he was singing his swan song.

Only a few hundred of the animals that once roamed Texas brush country are still in existence, and they are well cared for on ranches or in parks.

Proud survivor of a vanishing race.

The invention of barbed wire changed the methods of raising cattle on the ranges. It permitted more attention to breeding, a closer and better supervision of the herds, and the seeding of the ranges to better grasses. The Longhorn, the product of an environment concocted of equal parts of cactus, rattlesnakes, rocks, raiding Apaches and rustlers, lost out when barbed wire brought in the Hereford and other breeds with faster and more economical gains and better eating qualities. In the last analysis, the Longhorn was good for about everything but beef.

The singing cowboy joined up with radio or went to Hollywood, and the Longhorn ambled into limbo. His polished horns repose above the fireplaces of the cattle kings of today or adorn the bars of western saloons; but his bellow is no longer heard in the land.

The Longhorn is today rarer than the buffalo. Just before it was too late, the Government collected some last remaining specimens and sent them to the Wichita Mountains Wildlife Refuge near Lawton, Oklahoma. Here are 300 of the critters, all "purebred." Some private ranchers maintain small herds, some are owned by circuses. The Longhorn has no future except as a forlorn inhabitant of a zoo, or as a curiosity.

The Longhorn did not reach maturity before seven or eight years, but he was good for a decade or two after that. Both bulls and cows kept on producing at ages far greater than other breeds. The maximum length of horns was not achieved until well after maturity, at twelve or fifteen years of age. Cows and bulls wore modest horns – it was the steer which produced the king size. The record spread was a little over nine feet.

There was little use for the horns on the Longhorn's native range. They made good hat racks, passable furniture, and they were fine for ceiling and walls of adobe houses. They were cheap sources of glue once they got to the packing centers.

The size of the original Longhorns varied with his geography. Those from the Gulf Coast and Mexico rarely weighed more than 500 pounds. The Texas animal went to 1,200 pounds. If fed on good grass he might reach 2,000 or better. The majority of steers which went down the Chisholm Trail weighed from 800 to 900 pounds.

The Longhorn ranged from California through the Southwest to Florida, and in later years, as far north as the Dakotas. However, his greatest range was Texas. A few were tried in feedlots, but failed to do well, perhaps victims of claustrophobia.

After the profit motive came into Longhorn management, the bull calves were castrated at roundup time and branded, but in the wild herds there was an over-supply of eligible males. During the mating seasons

Few realize that only steers grow the formidable weapons that made the word "Longhorn" famous all over the world. This young fellow has the beginnings of a fine set.

their bellowing and brawlings were epic. Occasionally brave souls made an exploratory try at milking a Longhorn. This was not successful. The hazards were great and the milk return scant and anaemic.

Once the Longhorn had established the West as cattle country, his mission was done. Like the sixshooter, the horse and buggy, and whalebone corsets, he had to step aside when progress brought other and better adornments for our American civilization. But he built an empire, and tough and ornery as he was, he commands our respect for the rugged virtues which he possessed in such full measure.

. . . In traveling from El Paso to Brownsville, we were impressed with the roadside parks, placed at such short intervals, on what to us was a little-used highway.

We enjoyed the sturdy but artistic construction used and the type of planting used wherever possible.

I do not need to tell you that in California such parks are still in the planning stage.

Mr. & Mrs. Glenn McCune
California

. . . The other day my son received from you a beautiful highway map of Texas. I would very much like to have one of them, and haven't been able to talk him out of his.

I don't know where he got the card, possibly at the Houston Automobile Show.

The chiseler in me came out and I tried to erase the postal marking so I could send it in again, thereby getting one for myself, but my eraser isn't good and my heart wasn't in it, knowing it was the wrong thing to do.

I am enclosing the card which you can use again to save making a label. If the maps are free, please send one more. If there is a fee for the map, I am still desirous of having one, and if the cost is less than $1, please send me two because I could use both and don't want to write a check for less than $1. You can send me a bill and I'll pay it immediately, or advise me before mailing and I'll send the money. Please use my son's card, enclosed, for the address part, and I'll take it or them away from him.

R. F. Heath
Houston, Texas

. . . We didn't like the litterbugs. Unfortunately, some were tourists, too. You should tax consumer 1 cent per can or bottle for beverages, this to go to the Highway Department for cleaning up. . .

Breckenridge, Minnesota

. . . In 40 years of driving, this was my first free ride on a ferry!

Saranac Lake, New York

. . . Texas? We saw nothing of interest whatsoever. Only the queerest rivers. They had no water in them.

A. H. Lea
Markham, Ontario
Canada

. . . It appears that in some counties there is a lack of roadside parks or even turnouts, while some have several. Awfully nice to get off the road and stretch. . .

A. M. Hopperstead
Lansing, Michigan

. . . We didn't like the 100 mph (very good) roads with a 60 mph limit. But if it prevents accidents we are for it without reserve.

A. L. Clevenger
Wichita, Kansas

. . . We just completed delivery to your Department of approximately 11,000 yards of road gravel for shoulder build-up on Highway 77, Denton County.

While the work mentioned above was in progress we were amazed at the performance quality of your crew. The industry, care, integrity, exercised by all of your men from Messrs. Purcell, Ashby, and so on was without parallel in our experience. They were on the job on time. They worked diligently. They knew what they wanted, when, and where. As a result they got it!

Finally, the manner of grading and finishing up the work by the operators of your equipment gives mute testimony to a job well done.

It was a pleasure to serve you.

Rudy P. Prins
Dallas, Texas

OASI RESULTS

Texas state employees voted 94.6 per cent for coverage under the national Old Age and Survivors' Insurance (Social Security) in the February voting. Of a possible 23,933 votes, 23,172 were cast, meaning that less than 800 employees abstained. Coverage must now be voted into law by the Legislature.